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Application Number 10/751,359

Filing Date 01/05/2004

First Named Inventor Richard C. Wilmoth

Art Unit 3749

Examiner Name Derek S. Boles

Attorney Docket Number 03-0898.01

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George P. Kobler

Date

April 19, 2007

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April 19, 2007

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

In re Application of:
Wilmoth, Richard C.

Examiner: Derek S. Boles

App. Serial No.: 10/751,359

Art Unit: 3749

Filed: 01/05/2004

Title: **ORIENTATION
INDEPENDENT COMPARTMENT
PRESSURE RELIEF VALVE**

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

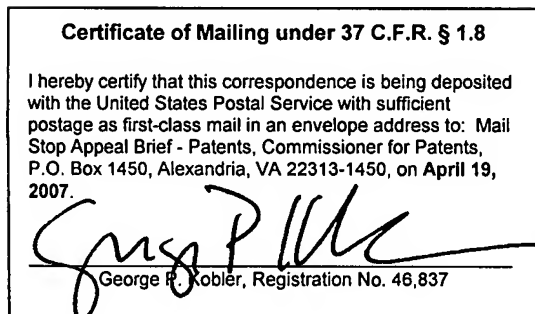
RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

Appellant acknowledges receipt of the **Notification of Non-Compliant Appeal Brief (37 CFR § 41.37)** mailed by the PTO on **March 20, 2007**, wherein Appellant was given one month to comply therewith. As grounds for the determination of non-compliance, it was indicated that the filed brief did not contain: a statement of the status of the claims; an explanation of the subject matter in each of the independent claims involved in the appeal; a statement of the ground of rejection, an argument under a separate heading; copies of evidence submitted relied upon by appellant in the appeal; nor copies of decisions of identified related

appeals or interferences; or that the listed sections did not have the proper headings or were not in the proper order.

Filed herewith is a Revised Brief in compliance with 37 C.F.R. § 41.37. Applicant points out that it is not identifying any related proceedings and therefore, there should be no need for copies of such decisions. Also, Applicant is not relying on any evidence, and so none is needed to be identified pursuant to Rule 41.37(c)(1)(ix).

Respectfully submitted,



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April 19, 2007

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Attorney Docket No.: 03-0898.01

Inventors: Wilmoth



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

In re Application of:
Wilmoth, Richard C.

Examiner: Derek S. Boles

App. Serial No.: 10/751,359

Art Unit: 3749

Filed: 01/05/2004

Title: **ORIENTATION
INDEPENDENT COMPARTMENT
PRESSURE RELIEF VALVE**

APPELLANT'S REVISED APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Arlington, Virginia 22313-1450

In response to the Notification of Non-Compliant Brief mailed March 20, 2007,
Appellant hereby submits its Revised Brief in accordance with 37 C.F.R. § 41.37.

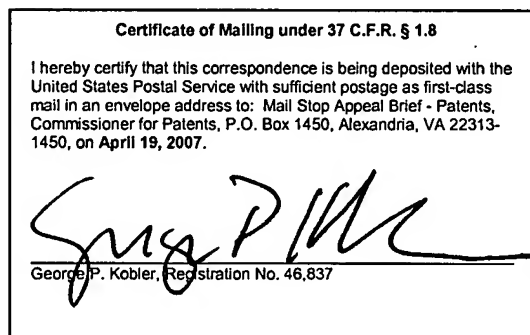


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REAL PARTY IN INTEREST

The real party in interest is CGR Valley Products, Inc., a North Carolina corporation having its principal place of business at 4655 US 29 North, Greensboro, North Carolina.

Attorney Docket No.: 03-0898.01
Inventors: Wilmoth

RELATED APPEALS AND INTERFERENCES

There are no other appeals and/or interferences known to Appellant, or its representative.

Attorney Docket No.: 03-0898.01
Inventors: Wilmoth

STATUS OF CLAIMS

Appellant has appealed to the Board of Patent Appeals and Interferences from the final rejection of claims 1-3, 5-7, 10, 11 and 14-16. Claims 4, 8, 9, 12, 13, and 17 were objected to as depending from rejected base claims, but were indicated as allowable if re-written in independent form.

Attorney Docket No.: 03-0898.01
Inventors: Wilmoth

STATUS OF AMENDMENTS

No amendments have been entered since Final Rejection dated January 12,
2006.

SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter is generally drawn to an air pressure relief valve that may be oriented independent of the direction of the influence of gravity. The innovation embodied in this design resides primarily in a light weight, two-layer flap that is secured by one side to the valve housing.

In particular, the sole Independent Claim, Claim 1, is drawn to a valve comprised of a housing (101) shown in Figure 1 that defines a channel (105). A sealing flap (110) is attached to the housing and is comprised of two layers: a pliable layer (113), and a rigid layer (114). The pliable layer is seated against the rim of the housing surrounding the opening of the channel. The rigid layer sits over the pliable layer toward the exit side of the valve. The rigid layer is light enough and flexible enough to flex away from the opening in response to pressure, but resilient such that it cooperates to seat the pliable layer against housing rim once the pressure is relieved. See Paragraphs [0019] through [0026] of the specification.

Attorney Docket No.: 03-0898.01
Inventors: Wilmoth

GROUND FOR REJECTION TO BE REVIEWED ON APPEAL

The following issue is presented to the Board of Appeals for decision.

1. Whether Claims 1-3, 5-7, 10, 11 and 14-16 under 35 U.S.C. § 103(a) are obvious over *Gies et al* (U.S. Pat. No. 5,355,910) in view of *Klomhaus et al* (U.S. Pat. No. 5,194,038).

ARGUMENT

A. Overview of the Cited References

The Examiner finally rejected claims 1 through 17 of the present application under 35 U.S.C. § 103 as being unpatentable over *Gies et al* (U.S. Pat. No. 5,355,910) in view of *Klombaas et al* (U.S. Pat. No. 5,194,038), referred to hereinafter as the '910 and the '038 patents, respectively.

1. ***The '910 Patent.*** The '910 patent teaches a one-way flap valve having a flexible layer (Fig. 2 at 24; Col. 3, ll. 41-47) that is overlaid with two rigid strips. The first strip (Fig. 2 at 34) is called a "mounting strip" to provide support for mounting the flap to a frame. *See* Col. 3, ll. 54-68. The second strip (Fig. 2 at 40; Col. 4, ll. 1-8) is bonded to the lower portion of the flexible layer, and serves to prevent warping and deformation of the flexible sheet. *See* Col. 4, ll. 18-22). The '910 patent also includes a gap (Fig. 2, at 42) between the first and second rigid strips to permit opening of the flap. Col. 4, ll. 8-14. The flap of the '910 patent closes by solely virtue of gravity. Col. 3, ll. 32-35.

2. ***The '038 Patent.*** The '038 patent is directed to a valve with a one-piece flap that is integrally molded with the valve frame. *See* '038 Patent Col. 1, 47-53; Col. 2, ll.

52, 58. The flap and frame are molded such that the flap extends through the passageway. See Col. 2, ll. 52-58; Fig. 3; Fig. 4, at 38a. The flap is drawn through the passageway to rest on the outer face of the frame. It is therefore, by virtue of the initially molded position that the flap is “elastically loaded” to a close the passageway. See Col. 2, 58-63. The '038 patent does not disclose or suggest being able to operate independent of its orientation to gravity. On the contrary, the flap of the '038 patent teaches only an orientation such that gravity assists in the closure of the flap. See Col. 2, l. 68 – Col. 3, l. 4. The frame upon which the flap is seated in the closed position to take advantage of the force of gravity to assist closure. See *id.*

B. Standard for § 103 Rejections

The Examiner bears the burden of establishing a *prima facie* case of obviousness under 35 U.S.C. § 103. To meet the burden of establishing a *prima facie* case, the Examiner must show

some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to . . . combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference[s] must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

MANUAL OF PATENT EXAMINING PROCEDURE ("MPEP") § 2142 8th Ed., Rev. 2 May, 2004
(citing *In re Vraek*, 947 F.2d 488 (Fed. Cir. 1991)).

As set forth in the MPEP, the suggestion, teaching or motivation to combine prior art references may flow, *inter alia*, from the references themselves, and the knowledge of one ordinary skill in the art or the nature of the problem to be solved. *See also Winner International Royal Corp. v. Wang*, 202 F.3d 1340, 53 U.S.P.Q. 2d 1580 (Fed. Cir. 2000); *In re Fine*, 837 F. 2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 U.S.P.Q. 2d 1941 (Fed. Cir. 1992). Although a reference need not expressly teach that the disclosure contained therein should be combined with another, showing of combinability, in whatever form must nevertheless be "clear and particular." *Winner International Royal Corp.*, 202 F. 3d at 1586 (emphasis supplied). If there is no motivation or suggestion to combine the references, one of ordinary skill in the art would not have viewed the Applicants' invention as obvious. *See In re Dance*, 160 F. 3d 1339, 1343, 48 U.S.P.Q. 2d 1635, 1639 (Fed. Cir. 1998); *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F. 3d 1573, 1578, 42 U.S.P.Q. 2d 1378, 1383 (Fed. Cir. 1997). ("The absence of such a suggestion to combine is dispositive in an obviousness determination.")

The second criteria to establish a *prima facie* case of obviousness is that there

must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Obviousness does not require absolute predictability. However, at least some degree is required. Evidence showing there is no reasonable expectation of success may support a conclusion of non-obviousness. *In re Rinehart*, 531 F.2d 1048, 189 U.S.P.Q. 143 (CCPA 1976).

The last criteria to establish a *prima facie* case of obviousness of a claimed invention is that all the claimed limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (CCPA 1970).

Further, no suggestion or motivation exists where the proposed modification, or combination, changes the principle of operation of a reference. *See* MPEP 2143.01, pp. 2100-132. In other words, the *prima facie* case fails where a proposed combination would “require a substantial reconstruction and redesign of the elements as well as a change in the basic principle under which the construction was designed to operate.” *Id.* (quoting *In re Ratti*, 270 F.2d 810, 813 (Cir. Ct. Pat. App. 1959) (emphasis supplied)).

Additionally, if an independent claim is not obvious under 35 U.S.C. § 103, then any claim depending therefrom is non-obvious. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988).

C. Claims 1-3, 5-7, 10, 11 and 14-16

The Examiner rejected Independent Claim 1 under §103(a) as being obvious over the '910 patent in view of the '038 patent asserting that the '910 patent “discloses all of the limitations of the claims except for the relatively rigid layer (sic) operates to close the sealing flap irrespective of the . . . valve’s orientation with respect to gravity.” The Examiner then asserts that the '038 patent “discloses a rigid layer operating to close the sealing flap irrespective of the pressure relief valve’s orientation” citing only the abstract of the '038 patent to support this conclusion. The remaining rejections are based upon these two references.

As shown below, the sole independent claim is patentable over this erroneous combination of references. It follows that so too are the claims that depend from it. Therefore, Appellant’s arguments herein are directed to this combination.

1. **There is no suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary**

skill in the art, to modify the reference or to combine reference teachings.

With the standard for a *prima facie* case of obviousness in mind, neither the '910 patent nor the '038 patent suggest or motivate one skilled in the art to combine them as proposed by the Examiner. A showing of a suggestion, teaching, or motivation to combine prior art references as required to find an invention obvious must be clear and particular and broad conclusory statements of the teaching of multiple references, standing alone, are not evidence. See *Brown & Williamson Tobacco Corp. v. Phillip Morris Inc.*, 229 F. 3d 1120, 1124, 56 U.S.P.Q. 2d 1456, 1460 (Fed. Cir. 2000). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q. 2d 1430 (Fed. Cir. 1990). Neither reference suggests the desirability of orienting the valve independent of the direction of the force of gravity. Indeed, both references, as shown above, expressly contemplate, are designed to operate, and therefore teach, valves that operate only in one orientation such that the flap opens downwardly so that gravity either closes ('910 patent) or assists in the closure ('038 patent) of the flap. As such, the Examiner's assertion that the abstract of the '038 patent discloses operation independent of gravity mischaracterizes the disclosure.

a.) **The '910 Patent.** First, Examiner does list the specific limitations of the claimed invention disclosed by the '910 patent. However, study of the '910 patent reveals that the flap disclosed comprises a flexible layer that is affixed to the top of a framed opening. The lower portion of the flexible layer is overlaid by a rigid “strip” to aid in preventing warping and deformation of the flexible layer. The flap is described, and claimed, to have a gap in between the lower rigid strip, and an upper rigid strip (called a “mounting strip”) to “permit[] the sheet 24 to flex along the line defined by the gap.” The '910 Patent, Col. 4, ll. 10-11. The frame is disclosed to be mounted “vertically oriented” (Col. 3, l. 32) and “inclined from the vertical so that under the influence of gravity” the flap closes. *Id.*, ll. 34-5. This, in no way, teaches or suggests the desirability of a two layer flap, as claimed, with a rigid outer layer that closes the flap irrespective of the direction of gravity. In fact, it teaches away from such an invention. Accordingly, attempting to combine this reference as the Examiner has done is improper.

b.) **The '038 Patent.** Likewise, the '038 patent does not suggest or provide motivation for the combination suggested by the Examiner. The flap of the '038 patent is disclosed only as an integrated part of the frame. It is also disclosed only as a single component, not a “layer” as described by the Examiner since the term “layer” presupposes at least two thicknesses.¹ The structure described in no way resembles or suggests the

¹ Webster's Ninth New Collegiate Dictionary defines “layer” as, “one thickness, course, or fold laid or lying over or under another.”

structure claimed in the present application. Moreover, contrary to Examiner's description of the reference nothing in the abstract expressly discloses or implicitly suggests the notion of the flap operating independent of gravity.² Therefore, Examiner has still not provided the necessary showing of combinability as required to establish the prima facie case of obviousness.

c.) *No Suggestion to Combine.* Not only does these references not teach or suggest that they should be combined with another, but the Examiner has provided no showing of combinability, in any form, which is "clear and particular." *See In re Dembiczak*, 175 F. 3d 994, 1000, 50 U.S.P.Q. 2d 1614, 1620 (Fed. Cir. 1999). In particular, because of the wide differences in the structures disclosed in the respective references, it is unclear as to how they could be combined to result in the present invention.

35 U.S.C. § 103 makes clear that the obviousness analysis should take place, "at the time the invention was made." *In re Dembiczak*, 175 F. 3d 994, 50 U.S.P.Q. 2d 1614, 1616 (Fed. Cir. 1999). It is this phrase that guards against entering into the "tempting but forbidden zone of hindsight." *Id.* "Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous

² The disclosure actually provides that the "flap has a plastic connecting portion or living hinge molded in situ integrally with the frame and flap and formed of a more elastic plastic than that of the frame." The '038 Patent, Col. 1, ll. 44-47. This does not suggest that the connecting portion is strong enough to bias the flap closed in, for example an upwardly opening orientation. As such, there is no enabling disclosure in this reference of a gravity

application of the requirement for a showing of the teaching or motivation to combine prior art references.” *In re Dembiczak*, 175 F. 3d at 999, 50 U.S.P.Q. 2d at 1617.

The only motivation for the combination offered by the Examiner is at page 2 of the Detailed Action claiming, “one skilled in the art would find it obvious to modify the system of [the '910 patent] to include a relatively rigid layer operating to close the sealing flap irrespective of the pressure relief valve’s orientation with respect to gravity of ['038 patent] for the purpose of better flap performance in various situations.” (emphasis supplied). This alleged motivation proposed by the Examiner, is vague at best, and certainly not “clear and particular.” Moreover, if the Examiner is attempting to argue that the suggestion, teaching, or motivation to combine the '910 patent with the '038 patent flows from the knowledge of one of ordinary skill in the art, he has provided no evidence to that affect, and instead has offered only conclusory statements. Broad conclusory statements are not evidence of a motivation to combine those references as would support a claim of obviousness. *See Ecolochem, Inc. v. Southern California Edison Co.*, 227 F. 3d 1361, 1372, 56 U.S.P.Q. 2d 1065, 1076 (Fed. Cir. 2000).

The Federal Circuit recently vacated a Board of Patent Appeals decision that upheld an obviousness rejection. In *In re Lee*, 277 F.3d 1338, 61 USPQ2d 1430 (Fed. Cir.

2002), the applicant appealed rejection of claims based on obviousness arguing, as does appellant here, that the references proffered by the examiner failed to provide a suggestion or motivation to combine in a way to achieve the invention claimed. The Board announced that “[t]he conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill . . . without any specific hint or suggestion in a particular reference.” *Id.*, at 1341. The Board sanctioned the examiner’s reasoning in support of the obviousness rejection but did not provide any more than a restatement of it. It should be noted that the examiner’s reasoning in *Lee* is more detailed than that provided in the instant case.³

In vacating the Board’s decision, the Federal Circuit restated the law that “[t]he factual inquiry whether to combine references must be thorough and searching. It must be based on objective evidence of record. This precedent has been reinforced in myriad decisions, and cannot be dispensed with . . . The need for specificity pervades this authority.” *Id.*, at 1343 (citations omitted). The court found that “neither the examiner nor the Board adequately supported the selection and combination of . . . the references” finding the examiner’s proffered reasons “conclusory” and intimating that attempting to do so improperly “use[s] that which the inventor taught against its teacher.” *Id.* at 1343-4 (*citing W. L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-313 (Fed. Cir. 1983)). *See*

³ The examiner in *Lee* supported the obviousness rejection by broadly concluding that a “demonstration mode is just a programmable feature” and that it is “user friendly.” *See In re Lee*, 277 F.3d at 1341.

also MPEP 2143.01, p. 2100-130. In the instant case, examiner's reasoning in support of the suggestion to combine, "for the purpose of better flap performance" is patently inadequate, since it is even less thorough, specific and enlightening than that offered by the examiner of *In re Lee*.

Additionally, it should be noted that the Examiner in the present case attempts to combine the *function* of the '038 patent (rigid flap that operates to close the sealing flap) with the *structure* of the '910 patent to achieve the teachings of the invention claimed. Analogizing to the law of anticipation, this is again improper since it is differences or similarities in structural limitations, not functional limitations, that determine the patentability of an invention. *See* MPEP §2114, p. 2100-60.

In summary, it is a basic tenant of patent law that the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination when applying 35 U.S.C. § 103 to reject a claim or claims. *See In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q. 2d 1443 (Fed. Cir. 1992); *In re Eli Lilly & Co.*, 402 F.2d 943, 14 U.S.P.Q. 2d 1741 (Fed. Cir. 1990). The ultimate determination of whether an invention would have been obvious is a legal conclusion based on the totality of the evidence including underlying factual inquiries into the differences between the claimed invention and the prior

art, and the objective evidence of non-obviousness. *See Brown & Williamson Tobacco Corp.*, 229 F.3d. at 1124. A review of the proposed references leads ineluctably to the conclusion they do not suggest the desirability of combining a gravity-dependent, non-integrated, flexibly opening flap having a rigid support disclosed in the '910 patent with an integrated, single-piece flap, having spring action but nonetheless gravity-dependent, to arrive at the claimed invention. Independent Claim 1, and the claims dependent from it, are non-obvious and patentable over the references cited.

2. The proposed combination changes the principle of operation of the '910 patent.

Assuming that the structures of the '910 patent and the '038 patent can be combined, the apparatus of the '910 patent would not operate under the same principles taught in its disclosure. The MPEP provides that “[i]f the proposed . . . combination of the prior art would change the principle of operation of the prior invention being modified, then the teaching of the references are not sufficient to render the claims *prima facie* obvious.” MPEP §2143.01, p. 2100-132 (*citing In re Ratti*, 270 F.2d 810, 123 USPQ 349 (C.C.P.A. 1959))(emphasis supplied). The recent Board case of *Ex parte Cavigelli*, Appeal No. 2002-0558, (2003 WL 23174998 (Bd. Pat. App. & Interf.)) is instructive on this issue. The examiner had rejected certain claims as obvious by substituting a non-ferrous core in a

primary reference with a ferrous core to achieve the structural limitations of the claimed invention. The Board held that because the primary reference “purposefully uses a non-ferrous . . . assembly,” the proposed modification would change the primary reference to a degree that was not permitted by the prior art. *See id.* at *5. In other words, “because the examiner’s proposal . . . would have required a change in the basic principle under which the reference was designed to operate, [the Board was] not persuaded that an artisan would have been motivated to combine the references.” *Id.*

Likewise, the proposed combination by Examiner in the instant case significantly alters the operating principles of the primary reference, the '910 patent. The flap of the '910 patent is expressly taught to close “under the influence of gravity.” *See* the '910 Patent, Col. 3, ll. 34-5. This is borne out by the inclusion of a gap between rigid strips so that the flexible sheet may pivot open and closed about the line defined by the gap without impedance. Further, the flap of the '910 patent is expressly disclosed to be a non-integrated flap. The '038 patent teaches a flap that is biased toward a closed position through integral molding in a position opposing the opening direction. This is completely inapposite to the teachings of the '910 patent and would apply a bias to a flap that is expressly designed to be gravity-dependent. As such, the combination of the '038 patent with the primary reference, the '910 patent, changes the operating principles of the '910

patent. “[P]rior art references . . . must be read as a whole and consideration must be given where the references diverge and teach away from the claimed invention.” *Id.*, (citing *Akzo N.V. v. U.S. Int’l Trade Comm’n*, 808 F.2d 1471, 1481, 1 USPQ2d 1241, 1246 (Fed. Cir. 1986).

Since combination of these references would alter the operating principles under which the apparatus of the '910 patent operates, the combination is not obvious to those skilled in the art. Therefore, the rejection of Independent Claim 1, and its dependent claims, under §103(a) is not supportable and should be withdrawn.

3. **The prior art references do not teach or suggest all of the claim limitations.**

Even if the '910 patent were properly combinable with the '038 patent, the combination would not result in a device having all of the novel features claimed by Appellant in Independent Claim 1. The flap of the '910 patent is non-integrated and includes a gap between rigid support members to allow for flexible opening of the pliable sheet. The flap of the '038 patent obtains spring action by virtue of being molded integrally in a position opposite its operating position. Because of the great disparity in the two structures, it is unclear how they could be combined and therefore, it would be speculative as what structural limitations the resulting apparatus would show. The two references,

however, do not teach a non-integrated, two-layer flap with a flexible inner layer and an relatively rigid outer layer that operates to close the flap. Therefore, the references cannot, by law and by the Patent Office's own rules, serve to render Independent Claim 1 obvious. *See* MPEP §2143.03, p. 2100-133.

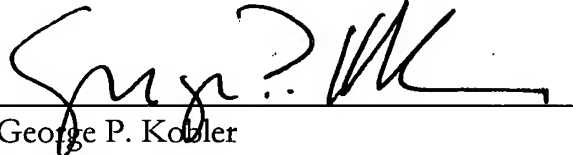
Claims 2 through 17 depend either directly or indirectly from Claim 1 and thus incorporate the limitations of the independent claim. If an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is non-obvious as well. *See id.* *See also In re, Fine*, 837 F.2d 1071, 5 U.S.P.Q. 2d 1596 (Fed. Cir. 1988). Accordingly, Appellant respectfully submits that dependent Claims 2 through 17 are in condition for allowance as well.

CONCLUSION

In conclusion, Appellant respectfully submits that, in view of the foregoing, and in view of the prior amendments and arguments in this case, Claims 1 through 17 define a gravity-independent pressure relief valve comprising a two-layer flap having a rigid layer and a flexible layer not taught or suggested by any of the above cited references, either alone or in combination. Accordingly, it is respectfully submitted that Claims 1 through 17 are now in condition for allowance. An earlier notice of reversal of the Examiner's rejection is therefore earnestly solicited.

Respectfully submitted,

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APPENDIX OF THE CLAIMS INVOLVED IN THIS APPEAL

1. An orientation independent compartment air pressure relief valve comprising:
 - a. a housing, said housing comprising a throughflow channel for allowing fluid communication from an intake of said channel to an exhaust of said channel; and
 - b. a sealing flap secured to said housing such that said sealing flap closes said exhaust of said channel and is adapted to flexibly open in response to pressure, said sealing flap comprising a relatively pliable layer oriented toward said intake and a relatively rigid layer oriented toward said exhaust, whereby said relatively rigid layer operates to close said sealing flap irrespective of said pressure relief valve's orientation with respect to gravity.
2. The pressure relief valve of Claim 1, wherein said relatively rigid layer is bonded to said relatively pliable layer.
3. The pressure relief valve of Claim 2, wherein said sealing flap is secured by one sealing flap edge to said housing.
4. The pressure relief valve of Claim 3, wherein said housing further comprises interlocks whereby said housing may be coupled with a like housing.

5. The pressure relief valve of Claim 3, further comprising a support spanning the exhaust end of said channel.
6. The pressure relief valve of Claim 2, further comprising a support spanning the exhaust end of said channel.
7. The pressure relief valve of Claim 6, wherein said sealing flap is secured to said support.
8. The pressure relief valve of Claim 7, wherein said housing further comprises interlocks whereby said housing may be coupled with a like housing.
9. The pressure relief valve of Claim 8, wherein said sealing flap is secured to said support by heat staking.
10. The pressure relief valve of Claim 1, wherein said relatively rigid layer is a comb, said comb having a plurality of tines and overlays said relatively pliable layer.

11. The pressure relief valve of Claim 10, wherein said sealing flap is secured by one sealing flap edge to said housing.
12. The pressure relief valve of Claim 11, wherein said housing further comprises interlocks whereby said housing may be coupled with a like housing.
13. The pressure relief valve of Claim 12, further comprising a support spanning the exhaust end of said channel.
14. The pressure relief valve of Claim 11, further comprising a support spanning the exhaust end of said channel.
15. The pressure relief valve of Claim 14, wherein said sealing flap is secured to said support.
16. The pressure relief valve of Claim 15, wherein said sealing flap is secured to said support by heat staking.
17. The pressure relief valve of Claim 16, wherein said housing further comprises interlocks whereby said housing may be coupled with a like housing.

EVIDENCE APPENDIX

NONE

RELATED PROCEEDINGS APPENDIX

NONE